LISTING OF THE CLAIMS

Claims 1-20 (Canceled)

Claim 21 (New): An apparatus for testing a pixel electrode structure in which a plurality of pixel electrodes are arranged in a matrix of n rows and m columns, each of n and m being a natural number more than 1, and each of said plurality of pixel electrodes being activated, comprising:

a testing unit which has at least one potential sensor using an FET function in which a specific one of said plurality of pixel electrodes is used as a gate of an FET;

wherein said at least one potential sensor is arranged opposite to said specific pixel electrode while keeping a predetermined distance from said specific pixel electrode, said potential sensor including two semiconductor regions of a first conductive type provided separately in a semiconductor region of a second conductive type, said FET function is realized by said potential sensor and said specific pixel electrode, said potential sensor is activated in response to a sensor activation signal to output a voltage detection result associated with an activated pixel electrode;

a drive section which relatively drives said testing unit to said specific pixel electrode with respect to said pixel electrode structure while keeping said predetermined distance, in response to a testing unit drive signal; and

a control unit which outputs said testing unit drive signal to said drive section, sequentially activates said specific pixel electrode and pixel electrodes adjacent to

said specific pixel electrode when said testing unit is driven to said specific pixel electrode, outputs said sensor activation signal to said testing unit, and detects a disconnection of said specific pixel electrode and a short-circuit between said specific pixel electrode and each of said adjacent pixel electrodes based on said voltage detection result.

Claim 22 (New): The apparatus according to Claim 21, wherein said testing unit comprises:

a plurality of said potential sensors arranged in one line,

said control unit outputs said sensor activation signal to said testing unit for each of said plurality of potential sensors, sequentially activates ones of said plurality of pixel electrodes corresponding to said plurality of potential sensors when each of said plurality of potential sensors is activated, and detects the disconnections of said pixel electrodes corresponding to said plurality of potential sensors based on said voltage detection results from said testing unit.

Claim 23 (New): The apparatus according to Claim 22, wherein when each of said plurality of potential sensors is activated, said control unit sequentially activates each of said adjacent pixel electrodes to said specific pixel electrode corresponding to the activated potential sensor, and detects the short-circuit between said specific pixel electrode and the activated adjacent pixel electrode based on said voltage detection result from said testing unit.

Claim 24 (New): The apparatus according to Claim 22, wherein said testing unit comprises:

said plurality of potential sensors;

a plurality of amplifiers respectively connected with said plurality of potential sensors; and

a scanner which sequentially selects outputs of said plurality of amplifiers for output to said control unit as said voltage detection result.

Claim 25 (New): The apparatus according to Claim 23, wherein said testing unit comprises:

said plurality of potential sensors;

a plurality of amplifiers respectively connected with said plurality of potential sensors; and

a scanner which sequentially selects outputs of said plurality of amplifiers for output to said control unit as said voltage detection result.